

- 1 - (AP20 Rec'd PCT/PTO 20 JUL 2006)

**Catalyst for the carbonylation of oxiranes****Abstract**

5 Lactones are prepared by the catalytic carbonylation of oxiranes using a catalyst system comprising

10 a) at least one carbonylation catalyst A comprising uncharged or anionic transition metal complexes of metals of groups 5 to 11 of the Periodic Table,

b) at least one metal compound B of the formula (I)



where

15 M is an element of group 2, 3, 4, 12, 13,

R is hydrogen or a hydrocarbon radical which may be substituted on the carbon atoms other than on the carbon atom bound to M,

X is an anion,

20 n is a number corresponding to the valence of M,

x is in the range from 0 to n, and

c) at least one organic, chiral compound C which has fewer than four coordination sites.